

Unless and until the Commission addresses these matters, video dialtone will remain very much a regulatory work in progress.

The filing of video dialtone applications by several local exchange carriers<sup>10/</sup> has transformed theoretical controversies over separations and costing into matters that require immediate attention. The seriousness of the flaws in these applications

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9/ (...continued)

and Center for Media Education (filed Oct. 9, 1992) at 24-32; Petition for Reconsideration of The National Association of Regulatory Utility Commissioners (filed Oct. 9, 1992) at 11-12; Petition for Reconsideration of The Pennsylvania Public Utility Commission (filed Oct. 9, 1992) at 7-13. While this petition for rulemaking seeks a result similar to the relief requested in the pending petitions for reconsideration, the instant petition is timely and appropriate because it presents new evidence for the adoption of video dialtone-specific rules and safeguards not available at the time for seeking reconsideration. Cf. 47 C.F.R. § 1.401 (imposing no time limitations on the filing of petitions for rulemaking).

10/ Application of New York Telephone Company, File No. W-P-C-6836 (filed Oct. 30, 1992) ("NYT Application"); Application of New Jersey Bell Telephone Company (Florham System), File No. W-P-C-6838 (filed Nov. 16, 1992) ("NJ Bell Florham Application"); Application of New Jersey Bell Telephone Company (Dover System), File No. W-P-C-6840 (filed Dec. 15, 1992) ("NJ Bell Dover Application"). In addition to these applications, U S West has reportedly announced plans to construct video dialtone systems throughout its service territory. See "U S West Announces Plan to Deploy Broadband Network Across Its Service Territory," Telecommunications Reports, Feb. 8, 1993, at 6-8.

The Commission recently granted a fourth application for a video dialtone trial. Application of Chesapeake and Potomac Telephone Company of Virginia, FCC 93-160 (rel. Mar. 25, 1993) ("C&P Order"). While the Commission there approved the carrier's accounting of only incremental costs incurred in the provision of the basic video dialtone platform, its decision was based on its finding that the application proposed "a limited trial involving relatively small costs." C&P Order at ¶ 13. Thus, by its own terms, the Commission's approval of this trial in no way resolves the broader cost allocation issues raised in this Joint Petition.

has drawn widespread opposition from state regulators,<sup>11/</sup> state consumer advocates,<sup>12/</sup> the cable industry,<sup>13/</sup> and the nation's largest consumer group.<sup>14/</sup> While the Commission may have hoped to address implementation issues in the context of specific applications, the pending applications raise so many basic policy questions that it would be inappropriate, inefficient, and unfair to attempt to resolve them in such an ad hoc fashion.<sup>15/</sup> To the contrary, the number and nature of the questions raised by the pending applications demonstrate the compelling logic of a comprehensive rulemaking. Even the Commission itself holds open the possibility that it will address

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<sup>11/</sup> See Petition to Deny, Public Service Commission of the District of Columbia, File No. W-P-C-6834 (filed Dec. 4, 1992).

<sup>12/</sup> See Request for Consumer Safeguards Concerning the Provision of Video Dial Tone by New Jersey Bell Telephone Company, Pennsylvania Office of Consumer Advocate and New Jersey Department of Public Advocate, Division of Rate Counsel, File No. W-P-C-6838 (filed Dec. 24, 1992) ("State Advocates Request for Consumer Safeguards").

<sup>13/</sup> See Petition to Deny, National Cable Television Association, Inc., File No. W-P-C-6840 (filed Jan. 22, 1993).

<sup>14/</sup> See Informal Comments of Consumer Federation of America, File no. W-P-C-6834 (filed Dec. 17, 1992); Letter from Gene Kimmelman to Donna R. Searcy, File No. W-P-C 6840 (Jan. 22, 1993).

<sup>15/</sup> Cf. Trans-Pacific Freight Conference of Japan/Korea v. Federal Maritime Comm'n, 650 F.2d 1235, 1244-45 (D.C. Cir. 1980) ("Rulemaking is an essential component of the administrative process and indeed is often the preferred procedure for the evolution of agency policies. Rulemaking permits more precise definition of statutory standards than would otherwise arise through protracted, piecemeal litigation of particular issues. It allows all those who may be affected by a rule an opportunity to participate in the deliberative process, . . . give[s] advance notice [to parties] of the standards to which they will be expected to conform in the future, and [achieves] uniformity of result.") (citations omitted), cert. denied, 451 U.S. 984 (1981).

these questions in a generic fashion rather than in the context of particular video dialtone applications.<sup>16/</sup>

The three pending applications raise such fundamental issues as whether video dialtone offerings should be subject to fully distributed or incremental cost standards;<sup>17/</sup> the proper allocation of costs between video and telephone service;<sup>18/</sup> the effect on basic ratepayers from the misallocation of expenditures on video dialtone;<sup>19/</sup> and the application of the Commission's accounting rules in the video dialtone context.<sup>20/</sup> These questions must be met head-on to effectively protect ratepayers and ensure fair competition, and to provide guidance to future video dialtone applicants.

The regulatory challenges posed by the advent of video dialtone are very real. Video dialtone service will require the telephone company to incur actual costs. These costs must be placed in appropriate accounting categories to ensure that they are not allocated to voice. They must be assigned, where

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<sup>16/</sup> See Video Dialtone Order, 7 FCC Rcd. at 5832 ("we believe that a future review of our rules and regulatory framework is warranted").

<sup>17/</sup> E.g., compare NJ Bell Dover Application at 9 with Letter from Gene Kimmelman to Donna R. Searcy, January 22, 1993, at 2.

<sup>18/</sup> See, e.g., State Advocates Request for Consumer Safeguards at 10-15.

<sup>19/</sup> See State Advocates Request for Consumer Safeguards at 2; Letter from Gene Kimmelman to Donna R. Searcy, Jan. 22, 1993, at 1-2.

<sup>20/</sup> E.g., compare NJ Bell Dover Application at 9 and Exh. 3 with Petition to Deny, National Cable Television Association, Inc., File No. W-P-C-6840 (filed Jan. 22, 1993) at 6-8.

appropriate, between regulatory jurisdictions. Regulated and non-regulated costs must be segregated and allocated to appropriate activities. Unless all of these functions are performed properly, basic ratepayers will find themselves underwriting the substantial costs of video dialtone offerings.<sup>21/</sup>

In the absence of clear cost accounting standards, for instance, New Jersey Bell proposes to assign to its telephone ratepayers one hundred percent of the cost of fiber trunks to be installed in conjunction with its video dialtone service, arguing that its motive for installing fiber optic cable is to upgrade telephone service.<sup>22/</sup> Forcing telephone customers to bear all of these costs is unjustified economically and unsound policy.

As a factual matter, the portion of video dialtone facilities used for telephone services is only a small part of the overall video dialtone facility. The bandwidth used for telephone service pales in comparison to the wideband facilities used for video. If a telephone company's only reason for installing fiber optic transmission facilities were the provision of telephone services, the number of installed fibers would be fewer, and the nature of the system electronics would be quite

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<sup>21/</sup> See Johnson Affidavit at 23 (characterizing New Jersey Bell's video dialtone application as "hopelessly inadequate" and concluding that New Jersey Bell's "willingness to rush into such uncharted waters can rest only on the confidence that its monopoly telephone ratepayers can be counted on for life boats").

<sup>22/</sup> See NJ Bell Dover Application at 5; NJ Bell Florham Application at 5.

different. If all of the cost or an excessive part of the cost of the jointly used facility is allocated to telephone service, rather than to video dialtone, telephone ratepayers will subsidize video service.

Given the documented uncertainty that already surrounds the question of how to apply existing regulatory mechanisms to video dialtone offerings, it is clear that these mechanisms -- the Part 32 accounting rules, the Part 36 jurisdictional separations procedures, the price cap rules established under Part 61, Part 64's separation of basic and enhanced services, and Part 69's access charge procedures -- must all be examined, and in many cases revised to accommodate video dialtone.

To assist the Commission in this task, NCTA retained Hatfield Associates to prepare a study detailing the incentives and abilities of local exchange carriers to misallocate the costs of video dialtone facilities to basic ratepayers and the inadequacies of the current cost allocation rules to prevent such a result. The study, which also outlines the necessary modifications to the current rules, is attached hereto as Appendix A.<sup>23/</sup>

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<sup>23/</sup> Hatfield Associates, Inc., CROSS-SUBSIDY CONCERNS RAISED BY LOCAL EXCHANGE CARRIER PROVISION OF VIDEO DIALTONE SERVICES (Mar. 29, 1993) ("HATFIELD STUDY").

**II. THE COMMISSION SHOULD ESTABLISH A JOINT BOARD TO RECOMMEND THE PROPER ALLOCATION OF PLANT USED JOINTLY FOR TELEPHONE AND VIDEO TRANSMISSION SERVICES**

As a threshold matter, the Commission should establish a Federal-State Joint Board specifically for the purpose of determining the proportion of video dialtone plant to be assigned to telephone service, and thereby subject to the separations process. Unless and until this determination is made, it will not be possible to ascertain whether either telephone or video transmission rates are just and reasonable.

Under Section 410(c) of the Communications Act,<sup>24/</sup> the Commission is required to consult with the states on questions of joint plant allocation. Traditionally, these questions have focused on the assignment of local telephone plant between the Federal and state jurisdictions. Following the submission of the Joint Board's recommendation, the Commission reviews the recommendation, accepting or modifying the proposal before it takes effect.

The advent of video dialtone requires the establishment of a specialized Joint Board. The Commission has already determined that the basic video dialtone platform is an interstate service.<sup>25/</sup> While video dialtone *revenues* will be treated as interstate, however, the *costs* of subscriber loops used jointly for video dialtone and telephone service will be allocated disproportionately to the intrastate jurisdiction. Assuming that

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<sup>24/</sup> 47 U.S.C. § 410(c).

<sup>25/</sup> Video Dialtone Order at 5819-5820.

these costs are allocated between the interstate and intrastate jurisdictions under the current 25/75 ratio,<sup>26/</sup> the effect is to allocate to the states **three-quarters of the loop costs and none of the associated video dialtone revenues!** Investments in video dialtone facilities will, as a result, likely put significant upward pressure on the rates for basic local telephone service.<sup>27/</sup>

Other facilities installed for video dialtone, such as fiber trunks, will also be used for telephone services as well as video dialtone.<sup>28/</sup> To the Joint Board falls the responsibility of determining the proportion of plant assigned to video and telephone services, respectively. Once that determination is made, the portion allocated to telephone service would be further divided between jurisdictions based on already-established allocation mechanisms.

A critical part of the Joint Board's work will be developing a formula for allocating the costs of subscriber loops and other non-traffic sensitive plant between the video and telephone services. The Joint Board may recommend the allocation of jointly used plant based upon relative bandwidth, relative use or some other measure. Whatever formula is selected must ensure that the costs attributable to video dialtone service are not allocated to local telephone service.

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<sup>26/</sup> See 47 C.F.R. § 36.154(c).

<sup>27/</sup> See HATFIELD STUDY at 18, 25-26.

<sup>28/</sup> See, e.g., NJ Bell Florham Application at 2-3.

The consequences of inaction are clear. If an excessive share of jointly-used plant is assigned to telephone service, telephone rates will be greater than justified and the rates for video dialtone service will not reflect the full costs of providing that service. In the absence of a governmentally-determined allocation, the local exchange carriers have, unsurprisingly, proposed to assign the *entire* cost of plant used jointly for video and telephony to basic ratepayers.<sup>29/</sup> The Commission and the states, through the Joint Board process, must act to prevent such an anticonsumer result from occurring in New Jersey or anywhere else.

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<sup>29/</sup> See NJ Bell Florham Application at 5; NJ Bell Dover Application at 5. Cf. HATFIELD STUDY at 8 (characterizing a zero incremental cost for fiber feeder as "an absurd result").



### III. THE COMMISSION SHOULD ADOPT VIDEO DIALTONE-SPECIFIC REGULATIONS TO SAFEGUARD CONSUMERS AND ENSURE FAIR COMPETITION

Once the costs of video dialtone plant are allocated between the interstate and intrastate jurisdictions, there remains the question of how to ensure that basic ratepayers do not bear the costs of providing video dialtone service. Failure to do so could raise rates for basic telephone service by more than \$10 billion *each year*.<sup>30/</sup>

There is no question that local telephone companies currently have the incentive and the ability to misallocate video dialtone costs. A telephone company that could underprice its own broadband transmission services would harm existing or potential competitors in the delivery of such services, enabling the telephone company to capture broadband transmission market share and forestalling the emergence of competitors in narrowband services.<sup>31/</sup> A local telephone company could misallocate costs to its basic telephone service -- and thereby underprice its video dialtone services -- by using telephone personnel to work on video dialtone projects or by adopting a particular network architecture because it provides the best foundation for video

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<sup>30/</sup> Assuming a total cost of \$200 billion over the next 15 to 20 years for the telephone companies to construct video dialtone facilities nationwide, the *annual* revenue required to support such an investment would amount to \$76 billion. See HATFIELD STUDY at 28-30. If less than 15 percent of this cost is misallocated to basic telephone services, ratepayers would pay \$10 billion in overcharges *each year*.

<sup>31/</sup> HATFIELD STUDY at 3-4.

dialtone services. If the costs of the design and construction of the network engineered for that purpose are recovered through basic telephone rates, cross-subsidy has occurred.<sup>32/</sup>

Cost misallocations in the context of video dialtone are inevitable, given the inadequacies of the current cost allocation rules.<sup>33/</sup> For instance, the rules permit local telephone companies to recover the costs of video dialtone capacity from basic ratepayers.<sup>34/</sup> Local telephone companies may even be able to charge ratepayers for expenses and investment associated with *failed* video dialtone ventures.<sup>35/</sup>

As detailed below, we propose that the Commission establish specific accounting and other safeguards that would separate the costs of providing video dialtone from the costs of telephone services. Isolating the costs of video dialtone services would most effectively protect ratepayers against becoming unwilling investors in video dialtone. Preventing the cross-subsidization

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<sup>32/</sup> Id. at 4-5. See also id. at 7 ("[C]osts of developing and providing a technical platform for Video Dialtone have undoubtedly already been booked in regulated company accounts. These costs must be identified and removed from the revenue requirements for telephone services.")

<sup>33/</sup> Id. at 16-22. In other contexts, telephone companies have misallocated more than \$300 million. See U.S. General Accounting Office, TELECOMMUNICATIONS: FCC'S OVERSIGHT EFFORTS TO CONTROL CROSS-SUBSIDIZATION (February 1993), at 12. Of course, the efficacy of any cost accounting rules is directly related to the resources available to the Commission to oversee compliance with those rules. In this regard, we note that the GAO has found the Commission's audit resources to be inadequate. Id. at 4-7.

<sup>34/</sup> HATFIELD STUDY at 16-18.

<sup>35/</sup> Id. at 19-20.

of video dialtone services would also ensure that local telephone companies and their customer-programmers compete fairly against other providers of video facilities and services.

**A. The Commission Should Adopt Video Dialtone-Specific Cost Accounting Rules**

Part 32 of the Commission's rules, the Uniform System of Accounts for Telecommunications Companies (USOA), establishes categories for the allocation of revenues and costs associated with the provision of service by common carriers. The USOA provides the starting point for the Commission and interested parties to assess the reasonableness of cost assignments among categories of equipment and service. In its current form, however, Part 32 does not adequately account for video dialtone.

The fatal infirmity of the existing accounting rules, at least with respect to video dialtone, is that the scheme provides no method for separately determining the costs of video and telephone services. The cost accounting rules reflect the network architecture historically used to deliver telephone service. Because broadband services use a substantially new architecture, the rules must be revised accordingly. Under the existing rules, for instance, the basic elements of the historical network structure -- loop, trunk, local switch and tandem switch -- are not recorded separately and distinctly in the accounting system. Without separate accounts for loops and

trunks, for instance, local telephone companies have significant discretion in apportioning costs among service categories.<sup>36/</sup>

Likewise, central office terminal equipment for video, the largest single expense category in a recently-filed video dialtone application,<sup>37/</sup> would be classified in the same accounting category as central office terminal equipment for telephone service. Since the magnitude of telephone investment is likely to overwhelm video facility investment indefinitely, placing central office terminal equipment for both services in the same category will produce aggregate numbers that provide virtually no insight into the reasonableness of the video investment. This, surely, is not the Commission's intent.

For accounting to have any value as a safeguard, each category that contains video facility costs must be separated into video and telephone subaccounts.<sup>38/</sup> In a small number of cases, entirely new video accounts may be required. But in any case, the aggregation of video and telephone accounts will lead inevitably to cross-subsidization.

**B. The Commission Must Determine the Proper Application of Its Access Charge and Price Cap Rules to Video Dialtone**

The video dialtone platform would appear to be a form of interstate access service through which interstate video programming is routed to end users. As with its cost accounting

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<sup>36/</sup> Id. at 13-14.

<sup>37/</sup> See NJ Bell Dover Application at Exhibit 3.

<sup>38/</sup> See HATFIELD STUDY at 24-25.

rules, the Commission should amend rules to require local exchange carriers to establish a separate access charge category for video dialtone to ensure that video dialtone costs are not subsumed in access services provided to interexchange carriers.

As an interstate access service, moreover, video dialtone would seem to fall within the Commission's price cap procedures. Local exchange carriers subject to price cap regulation are required to establish baskets for common line, traffic sensitive switched and special access service elements,<sup>39/</sup> but video dialtone does not fit into any of the "baskets" established for interstate access. To prevent cross-subsidization of video dialtone services, a separate basket must be created.<sup>40/</sup>

Including video dialtone within the existing baskets for telephone service virtually invites cross-subsidization by giving the local exchange carrier the flexibility to reduce the charge for video dialtone below "cost" and recover the shortfall by raising rates for other services included in the relevant basket or baskets. If video dialtone and other interstate telephone services are included in the same basket, assessing the reasonableness of the charges for any of the services in that basket will be impossible. Given the specialized nature of video dialtone service, it should be treated as *sui generis* for purposes of determining its place within the price cap framework.

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<sup>39/</sup> See 47 C.F.R. § 61.42(d).

<sup>40/</sup> HATFIELD STUDY at 27.

**C. The Commission Should Adopt Procedures for Separating the Costs of Regulated and Non-Regulated Video Dialtone Services**

Video dialtone service is not only a basic common carrier transmission service; it will also include the offering by telephone companies of "enhanced gateways" and other unregulated services. These activities will result in costs that must be kept separate not only from telephone service, but also from the costs associated with the basic video dialtone platform.

Carriers are required to separate regulated and non-regulated costs in accordance with Commission-mandated cost allocation manuals (CAMs).<sup>41/</sup> Because the CAMs are based on the cost accounting rules, however, the cost allocation procedures suffer from the same infirmities as the cost accounting rules.<sup>42/</sup>

With respect to video dialtone cost allocations, the Commission is faced with two tasks: separating video dialtone costs from the costs of telephone service, and separating the costs of providing the regulated video dialtone platform from unregulated "enhanced" video dialtone services such as customized menus. Not only do current rules fail to separate video from telephone services, they do not provide a mechanism for earmarking the costs of "enhanced" video dialtone functions. Moreover, the Commission has not yet defined which "enhanced" functions would be subject to direct assignment and those that

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<sup>41/</sup> 47 C.F.R. § 64.903.

<sup>42/</sup> HATFIELD STUDY at 15; see also pp. 16-17, supra.

are likely to be classified within common cost categories. Completion of these steps is a necessary predicate to ensuring that CAMs fully and accurately reflect the costs of providing video dialtone service.<sup>43/</sup>

**D. The Commission Should Adopt Video Dialtone-Specific Rules for Joint Marketing and Customer Privacy**

Finally, the Commission should take this opportunity to adopt limitations on the joint marketing of basic telephony and video dialtone service, and on the use of information about subscriber preferences that a telephone company may obtain as a video dialtone provider.<sup>44/</sup>

The provision of video dialtone by the same corporate entity that provides telephone service gives rise to a number of practical concerns unique to this context. If a telco's customer service representatives were able to market video dialtone

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<sup>43/</sup> At a minimum, CAMs should be modified to require identification and attribution of previously-expensed video dialtone items, and should be reviewed to ensure that directly assignable video dialtone costs are in fact being directly assigned. Accounting separations rules should also be changed to minimize the transfer of expenses and investments back to the regulated category when demand for unregulated services fails to materialize. HATFIELD STUDY at 27.

Additionally, the Commission's Automated Regulatory Management Information System (ARMIS) should be refined to capture data necessary to enforce cost allocation and accounting rules with respect to video dialtone. For instance, ARMIS reports should provide comparative detail on fiber and copper investment and expenses. See id. at 28.

<sup>44/</sup> The Commission concluded, incorrectly, that Customer Proprietary Network Information ("CPNI") and joint marketing procedures applicable to a local exchange carrier's offering of customer premises equipment and enhanced services are adequate to address competitive and privacy concerns that arise in the context of video dialtone. See Video Dialtone Order at 5830 n.243.

service at the same time as telephone service, for instance, the telco would thereby obtain an unfair advantage over every other provider of video facilities or services. Video dialtone operations would have a particular advantage with respect to new arrivals in a community who could be expected to request telephone service almost immediately upon moving in. The Commission previously recognized this unfair advantage in the context of the joint marketing of customer premises equipment (CPE) and telephone service, requiring the Bell Operating Companies to inform customers of alternative sources of equipment and to permit competing equipment vendors to offer local telephone service together with the equipment.<sup>45/</sup>

The privacy concerns arising from the joint provision of telephone service and video dialtone are also unique. In permitting a local exchange carrier to offer enhanced services without requiring a structurally-separate subsidiary, the Commission balanced the benefits to consumers of "one stop shopping" against the risk of a telephone company using customers' calling patterns to competitive advantage, and concluded that the benefits exceeded the risks.

The offering of video dialtone service demands a different calculus than the one applied to enhanced services. Telephone

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<sup>45/</sup> See BOC Separation Order, 95 F.C.C. 2d 1117, 1143 (1983), aff'd sub nom. Illinois Bell Telephone Co. v. FCC, 740 F.2d 465 (7th Cir. 1984), recon. denied, 56 Rad. Reg. 2d (P&F) 581 (1984), aff'd sub nom. North American Telecommunications Ass'n v. FCC, 772 F.2d 1282 (7th Cir. 1985); Sales Agency Order, 98 F.C.C. 2d 943, 945 (1984), aff'd and clarified on recon., 59 Rad. Reg. 2d (P&F) 309 (1985).



companies should not be permitted to gather television viewing patterns and market the information on individual subscribers to customer-programmers. Television viewers should be allowed to select individual programs without fear that their viewing choices will be scrutinized by industry or government. Merely applying the existing CPNI rules (which offer virtually no privacy protection for residential or small business subscribers) to video dialtone would not provide video dialtone customers with even the minimum acceptable level of security.

#### CONCLUSION

The filing of four fundamentally flawed video dialtone applications requires that the Commission commence a comprehensive proceeding to adopt rules for the implementation of video dialtone service. The Commission should establish a Federal-State Joint Board to determine the proportion of plant investment used jointly to provide video and telephone service that should be allocated to each service. The Commission should also revise accounting, access charge, price cap, joint cost and joint marketing procedures to prevent cross-subsidization of video dialtone by basic ratepayers and to address other regulatory issues created by the authorization of this service. Until these rules are in place, the Commission should hold the pending video dialtone applications in abeyance and refuse to accept any additional applications. Failure to act will impose a

heavy burden on consumers and undermine competition in the video marketplace.

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## ATTACHMENT 2

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**THE IMPACT OF  
PREMIUM TELEPHONE SERVICES  
ON THE TECHNICAL DESIGN,  
OPERATION AND COST OF  
LOCAL EXCHANGE PLANT**

By

Richard Gabel

The Public Policy Institute was formed in 1985 as part of the Division of Legislation, Research and Public Policy of the American Association of Retired Persons. One of the missions of the Institute is to foster research and analysis on public issues of interest to older Americans. This paper represents part of that effort.

The views expressed herein are for information, debate and discussion, and do not necessarily represent formal policies of the Association.

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## EXECUTIVE SUMMARY

This paper analyzes the impact of providing three premium services -- long distance service at the turn of the twentieth century, direct distance dialing in the middle of the century, and now intelligent network services at the end -- on local telephone exchange plant. The report applies an analytic model of technological change to these three major changes in telephone service. In this model, technological changes are responses to engineering and design problems posed by the provision of new services over existing local telephone exchange plant. Making new services available over existing facilities necessitates a variety of technical transformations, affecting:

- \* Transmission medium over which communications occur.
- \* Switches, which determine how messages are routed.
- \* Signaling systems, which determine how the flow of traffic is controlled.
- \* Numbering systems, which determine how messages are identified.
- \* Accounting systems, which determine how transactions are recorded and billed.

As a result of these technical transformations the very organization of the network, who talks to whom and what constitutes communication, is transformed. The success of new services depends not only on technical changes to transmission, switching, etc., but also on the magnitude of the costs associated with those changes, how regulators allocate those costs among existing customers, and how prices for services change as a result of these decisions. The model considers all these factors as they affect both new and existing services. The results of the model are summarized in Table ES-1.

The paper shows that previous instances in the addition of premium services imposed costs on local exchange plant because that plant, which was utilized by all services, had to be upgraded to meet the most rigorous needs of the most demanding services. While the addition of premium services enhanced the quality of telephone service, lax regulatory mechanisms resulted in the misallocation of costs. Premium services brought cost increases, but regulators failed to study cost causation closely. As a result, regulators accepted telephone company arguments that basic service did not cover its costs, when the opposite was actually the case.

The historical misallocation of costs pales in comparison to the potential misallocation of intelligent network service costs. In the next several decades hundreds of billions of dollars will be spent upgrading the telephone network, shifting its focus from voice uses to data and video uses.

This paper demonstrates the need for careful cost causative analysis. The cost